```
=> d his ful

     (FILE 'HOME' ENTERED AT 12:50:21 ON 04 NOV 2009)

     FILE 'HCAPLUS' ENTERED AT 12:50:51 ON 04 NOV 2009
L1             1 SEA SPE=ON  ABB=ON  PLU=ON  US20080226986/PN
                 D L1 ALL
                 SAV L1 KWA517/A
                 SEL L1 RN

     FILE 'REGISTRY' ENTERED AT 12:52:01 ON 04 NOV 2009
L2             8 SEA SPE=ON  ABB=ON  PLU=ON  (28408-24-4/BI OR 28408-25-5/
                 BI OR 7429-90-5/BI OR 7439-93-2/BI OR 7440-44-0/BI OR
                 7782-42-5/BI OR 863184-63-8/BI OR 863184-65-0/BI)
                 D SCA
                 SAV L2 KWA517A/A

     FILE 'LREGISTRY' ENTERED AT 12:56:38 ON 04 NOV 2009
L3               STR
L4               STR

     FILE 'REGISTRY' ENTERED AT 13:03:11 ON 04 NOV 2009
L5            50 SEA SSS SAM L4

     FILE 'LREGISTRY' ENTERED AT 13:04:13 ON 04 NOV 2009
L6               STR L4

     FILE 'REGISTRY' ENTERED AT 13:25:09 ON 04 NOV 2009
L7            50 SEA SSS SAM L6
                 D QUE STAT L7
                 D QUE STAT L5

     FILE 'LREGISTRY' ENTERED AT 13:27:15 ON 04 NOV 2009
L8               STR L6

     FILE 'REGISTRY' ENTERED AT 13:39:33 ON 04 NOV 2009
L9            50 SEA SSS SAM L8
L10        14238 SEA SSS FUL L8
L11            4 SEA SPE=ON  ABB=ON  PLU=ON  L10 AND L2
                 SAV L10 KWA517C/A

     FILE 'LREGISTRY' ENTERED AT 13:42:35 ON 04 NOV 2009
L12              STR L8
L13              SCR 2040
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L14           6 SEA SUB=L10 SSS SAM L12 AND L13
                D SCA

L15         237 SEA SUB=L10 SSS FUL L12 AND L13

     FILE 'HCAPLUS' ENTERED AT 13:47:00 ON 04 NOV 2009
L16         222 SEA SPE=ON  ABB=ON  PLU=ON  L15

     FILE 'ZCAPLUS' ENTERED AT 13:47:29 ON 04 NOV 2009
L17             QUE SPE=ON  ABB=ON  PLU=ON  ?CATHODE?

     FILE 'HCAPLUS' ENTERED AT 13:47:43 ON 04 NOV 2009
L18           3 SEA SPE=ON  ABB=ON  PLU=ON  L16 (L) L17

     FILE 'ZCAPLUS' ENTERED AT 13:48:03 ON 04 NOV 2009
L19             QUE SPE=ON  ABB=ON  PLU=ON  ?NITROXYL?

     FILE 'HCAPLUS' ENTERED AT 13:48:20 ON 04 NOV 2009
L20          11 SEA SPE=ON  ABB=ON  PLU=ON  L16 (L) L19
L21           3 SEA SPE=ON  ABB=ON  PLU=ON  L16 AND L17

     FILE 'ZCAPLUS' ENTERED AT 13:49:16 ON 04 NOV 2009
L22             QUE SPE=ON  ABB=ON  PLU=ON  BATTERY# OR BATTERIES#

     FILE 'HCAPLUS' ENTERED AT 13:49:33 ON 04 NOV 2009
L23           3 SEA SPE=ON  ABB=ON  PLU=ON  L16 (L) L22
L24           4 SEA SPE=ON  ABB=ON  PLU=ON  L16 AND L22
L25          12 SEA SPE=ON  ABB=ON  PLU=ON  L24 OR L23 OR L21 OR L20 OR
                L18


     FILE 'LREGISTRY' ENTERED AT 13:51:44 ON 04 NOV 2009

     FILE 'HCAPLUS' ENTERED AT 13:54:17 ON 04 NOV 2009
L26          45 SEA SPE=ON  ABB=ON  PLU=ON  L11
L27          44 SEA SPE=ON  ABB=ON  PLU=ON  L26 NOT L25

     FILE 'ZCAPLUS' ENTERED AT 13:56:02 ON 04 NOV 2009
L28             QUE SPE=ON  ABB=ON  PLU=ON  ?CARBON? (3A) ?CONDUCT?

     FILE 'HCAPLUS' ENTERED AT 13:56:27 ON 04 NOV 2009
L29           0 SEA SPE=ON  ABB=ON  PLU=ON  L16 AND L28
L30          41 SEA SPE=ON  ABB=ON  PLU=ON  L16 AND L19
L31           8 SEA SPE=ON  ABB=ON  PLU=ON  L30 (3A) ?POLYMER?
L32           8 SEA SPE=ON  ABB=ON  PLU=ON  L31 NOT L25
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FILE 'LREGISTRY' ENTERED AT 13:59:33 ON 04 NOV 2009

FILE HOME

FILE HCAPLUS

FILE COVERS 1907 - 4 Nov 2009 VOL 151 ISS 19
FILE LAST UPDATED: 3 Nov 2009 (20091103/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

HCAplus now includes complete International Patent Classification (I reclassification data for the third quarter of 2009.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate substance identification.

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FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 2 NOV 2009 HIGHEST RN 1190920-68-3
DICTIONARY FILE UPDATES: 2 NOV 2009 HIGHEST RN 1190920-68-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 26, 2009.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For informatio on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

FILE LREGISTRY
LREGISTRY IS A STATIC LEARNING FILE

CAS INFORMATION USE POLICIES, ENTER HELP USAGETERMS FOR DETAILS.

FILE ZCAPLUS

FILE COVERS 1907 - 4 Nov 2009 VOL 151 ISS 19
FILE LAST UPDATED: 3 Nov 2009 (20091103/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

ZCAplus now includes complete International Patent Classification (I reclassification data for the third quarter of 2009.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate substance identification.

During November, try the new LSUS format of legal status information in the CA/CAplus family databases for free! Complete details on the number of free displays and other databases participating in this offer appear in NEWS 10.

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L8              STR
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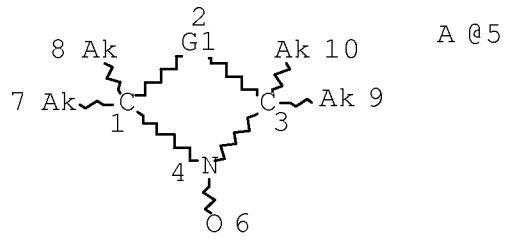


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NODE ATTRIBUTES:
CONNECT IS E1  RC AT   6
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  10

STEREO ATTRIBUTES: NONE
L10       14238 SEA FILE=REGISTRY SSS FUL L8

100.0% PROCESSED  420233 ITERATIONS                          14238 ANSWERS
SEARCH TIME: 00.00.17


=> d que stat l15
L8              STR
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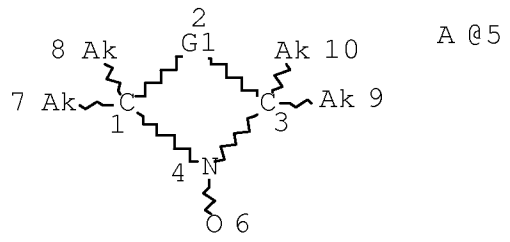


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REP G1=(2-4) 5
NODE ATTRIBUTES:
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CONNECT IS E1 RC AT   6
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DEFAULT ECLEVEL IS LIMITED

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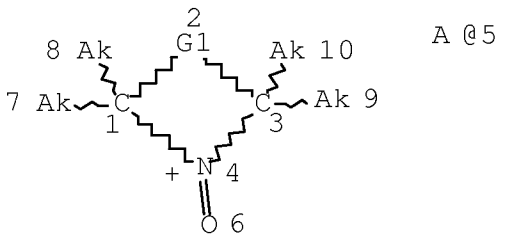
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
L10   14238 SEA FILE=REGISTRY SSS FUL L8
L12   STR



REP G1=(2-4) 5
NODE ATTRIBUTES:
CHARGE IS *+   AT   4
CONNECT IS E1 RC AT   6
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
L13   SCR 2040
L15   237 SEA FILE=REGISTRY SUB=L10 SSS FUL L12 AND L13

100.0% PROCESSED   318 ITERATIONS   237 ANSWERS
SEARCH TIME: 00.00.01

=> d l25 1-12 bib abs hitstr hitind
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

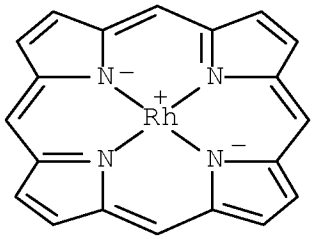
L25 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 2008:81515 HCAPLUS Full-text
DN 148:284662
TI Carbon-carbon bond activation of 2,2,6,6-tetramethyl-piperidine-1-oxyl by a RhII metalloradical: a combined experimental and theoretical study
AU Chan, Kin Shing; Li, Xin Zhu; Dzik, Wojciech I.; de Bruin, Bas
CS Department of Chemistry, The Chinese University of Hong Kong, Shatin, New Territories, Hong Kong, Peop. Rep. China
SO Journal of the American Chemical Society (2008), 130(6), 2051-2061
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
OS CASREACT 148:284662
AB Reaction of the stable radical, 2,2,6,6-tetramethyl-piperidine-1-oxyl with Rh(II) meso-tetramesitylporphinate proceeds mainly as C-C-bond activation (CCA) and Me transfer, giving methylrhodium(III) porphinate and 2,2,6-trimethyl-2,3,4,5-tetrahydropyridine N-oxide. A competitive minor carbon-hydrogen bond activation (CHA) channel produces 1-hydroxy-2,2,6,6-tetramethylpiperidine (TEMPOH). The yield of the CCA product [RhIII(tmp)Me] increased with higher temperature at the cost of the CHA product TEMPOH in the temperature range 50-80°. Both the CCA and CHA pathways follow second-order kinetics. The mechanism of the TEMPO carbon-carbon bond activation was studied by means of kinetic investigations and DFT calcns. Broken symmetry, unrestricted B3LYP calcns. along the open-shell singlet surface reveal a low-energy transition state (TS1) for direct TEMPO Me radical abstraction by the RhII radical (SH2 type mechanism). An alternative ionic pathway, with a somewhat higher barrier, was identified along the closed-shell singlet surface. This ionic pathway proceeds in two sequential steps: Electron transfer from TEMPO to [RhII(por)] producing the [TEMPO]+[RhI(por)]- cation-anion pair, followed by net CH3+ transfer from TEMPO+ to RhI with formation of [RhIII(por)Me] and (DMPO-like) 2,2,6-trimethyl-2,3,4,5-tetrahydro-1-pyridiniumolate. The transition state for this process (TS2) is best described as an SN2-like nucleophilic substitution involving attack of the dz2 orbital of [RhI(por)]- at one of the CMe-Cring σ* orbitals of [TEMPO]+. Although the calculated barrier of the open-shell radical pathway is somewhat lower than the barrier for the ionic pathway, R-DFT and U-DFT are not likely comparatively accurate enough to reliably distinguish between these possible pathways. Both the radical (SH2) and the ionic (SN2) pathway have barriers which are low enough to explain the exptl. kinetic data.
IT 1007605-39-1

RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); PROC (Process); RACT (Reactant or reagent)
(kinetics and potential energy surface for Me and hydride transfer reactions of TEMPO nitroxyl radical and rhodium porphinato complexes)

RN 1007605-39-1 HCAPLUS
CN Piperidinium, 2,2,6,6-tetramethyl-1-oxo-, (SP-4-1)-[21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]rhodate(1-) (1:1) (CA INDEX NAME)

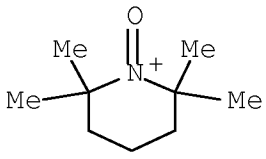
CM 1

CRN 1007605-38-0
CMF C20 H12 N4 Rh
CCI CCS



CM 2

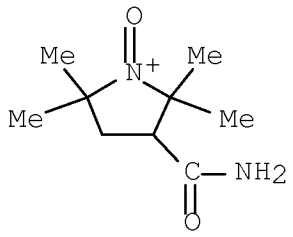
CRN 45842-10-2
CMF C9 H18 N O



CC 22-4 (Physical Organic Chemistry)
Section cross-reference(s): 26, 29, 78
IT 956578-75-9, Rhodium porphinate 1007605-36-8 1007605-37-9
1007605-39-1
RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); PROC (Process); RACT (Reactant or reagent)
(kinetics and potential energy surface for Me and hydride transfer reactions of TEMPO nitroxyl radical and rhodium porphinato complexes)
OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
RE.CNT 82 THERE ARE 82 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 2007:1009278 HCAPLUS Full-text
DN 148:466171
TI Radical-scavenging activity of nitroxyl radical as an electron donor
AU Manda, S.; Kawaguchi, K.; Ohkubo, K.; Kawashima, T.; Kanazawa, H.; Takeshita, K.; Anzai, K.; Ozawa, T.; Fukuzumi, S.; Ikota, N.; Nakanishi, I.
CS Heavy-Ion Radiobiology Research Group, Research Center for Charged Particle Therapy, National Institute of Radiological Sciences, Inage-ku, Chiba, 263-8555, Japan
SO Proceedings of the Congress of the Society for Free Radical Research International, 13th, Davos, Switzerland, Aug. 15-19, 2006 (2006), 237-239 Publisher: Monduzzi Editore, Bologna, Italy.
CODEN: 69JTC5; ISBN: 88-7587-274-0
DT Conference
LA English
AB Cumylperoxyl radical (PhCMe2OO•), generated under irradiation of a propionitrile solution of cumene, di-tert-Bu peroxide, and O2 at 193 K, was efficiently scavenged by 3-carbamoyl-2,2,5,5-tetramethylpyrrolidine- N-oxyl (CP), a frequently used spin probe for in vivo ESR measurements. The scavenging rate is found to be accelerated in the presence of Sc(OSO2CF3)3, indicating that CP scavenges PhCMe2OO• via an electron transfer from CP to PhCMe2OO• rather than via a radical-coupling reaction. The coordination of Sc3+ to PhCMe2OO- thus produced decreases the free energy change of the electron transfer, resulting in the acceleration of the scavenging reaction.
IT 46147-12-0
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(radical-scavenging activity of nitroxyl radical as an electron donor)

RN 46147-12-0 HCAPLUS
CN Pyrrolidinium, 3-(aminocarbonyl)-2,2,5,5-tetramethyl-1-oxo- (CA INDEX NAME)



CC 9-5 (Biochemical Methods)
Section cross-reference(s): 6, 8
IT 4399-80-8 7175-54-4 46147-12-0
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(radical-scavenging activity of nitroxyl radical as an electron donor)
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 2007:701897 HCAPLUS Full-text
DN 147:98690
TI Separator-less thin power storage devices with high performance
IN Morioka, Yukiko; Suguro, Masahiro; Iriyama, Jiro; Iwasa, Shigeyuki
PA Nec Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 25pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2007165054	A	20070628	JP 2005-357932	200512 12
PRAI JP 2005-357932		20051212		

AB The title device has a cathode containing a nitroxyl macromol. which shows cationic nitroxyl moiety =N+=O (I) in oxidation state and radical nitroxyl moiety +N-O· (II) in reduction state for donating and accepting electrons between I and II in cathode reaction, an

anode containing a Li or Li alloy active mass, and a cathode current collector composed of a metal sheet and a conductivity-improving layer containing materials with hole-transporting group and electron-transporting group. The cathode is directly in contact with the anode. The device has high capacity in high c.d. and high output.

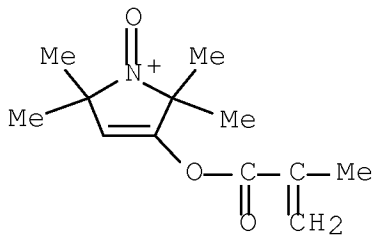
IT 942407-93-4
RL: TEM (Technical or engineered material use); USES (Uses)
(cathode material; separator-less thin power storage devices having cathode containing nitroxyl macromol. and anode containing Li or Li alloy)

RN 942407-93-4 HCAPLUS

CN 1H-Pyrrolium, 2,5-dihydro-2,2,5,5-tetramethyl-3-[(2-methyl-1-oxo-2-propen-1-yl)oxy]-1-oxo-, homopolymer (CA INDEX NAME)

CM 1

CRN 942407-92-3
CMF C12 H18 N O3



CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST separatorless thin power storage device nitroxyl macromol cathode; battery nitroxyl macromol cathode lithium anode

IT Battery anodes
Battery cathodes
Secondary batteries
(separator-less thin power storage devices having cathode containing nitroxyl macromol. and anode containing Li or Li alloy)

IT 7439-93-2, Lithium, uses 53680-59-4 68848-64-6
RL: TEM (Technical or engineered material use); USES (Uses)
(anode active mass; separator-less thin power storage devices having cathode containing nitroxyl macromol. and anode containing Li or Li alloy)

IT 28408-25-5 942407-93-4
RL: TEM (Technical or engineered material use); USES (Uses)

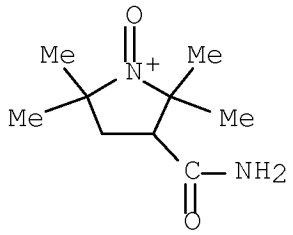
(cathode material; separator-less thin power storage devices having cathode containing nitroxyl macromol. and anode containing Li or Li alloy)

IT 7429-90-5, Aluminum, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(current collector substrate; separator-less thin power storage devices having cathode containing nitroxyl macromol. and anode containing Li or Li alloy)

IT 15082-28-7 163226-12-8
RL: TEM (Technical or engineered material use); USES (Uses)
(electron-transporting material; separator-less thin power storage devices having cathode containing nitroxyl macromol. and anode containing Li or Li alloy)

IT 123847-85-8 942407-94-5
RL: TEM (Technical or engineered material use); USES (Uses)
(hole-transporting material; separator-less thin power storage devices having cathode containing nitroxyl macromol. and anode containing Li or Li alloy)

L25 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 2007:340260 HCAPLUS Full-text
DN 146:521349
TI Scandium ion-accelerated scavenging reaction of cumylperoxyl radical by a cyclic nitroxyl radical via electron transfer
AU Nakanishi, Ikuo; Kawaguchi, Kumiko; Ohkubo, Kei; Kawashima, Tomonori; Manda, Sushma; Kanazawa, Hideko; Takeshita, Keizo; Anzai, Kazunori; Ozawa, Toshihiko; Fukuzumi, Shunichi; Ikota, Nobuo
CS Redox Regulation Research Group, Research Center for Radiation Safety, National Institute of Radiological Sciences (NIRS), Inage-ku, Chiba, 263-8555, Japan
SO Chemistry Letters (2007), 36(3), 378-379
CODEN: CMLTAG; ISSN: 0366-7022
PB Chemical Society of Japan
DT Journal
LA English
AB A cyclic nitroxyl radical used as a spin probe efficiently scavenges cumylperoxyl radical in an aprotic medium via an electron-transfer process, which is significantly accelerated by the presence of scandium ion.
IT 46147-12-0
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(scandium ion-accelerated scavenging reaction of cumylperoxyl radical by cyclic nitroxyl radical via electron transfer)
RN 46147-12-0 HCAPLUS
CN Pyrrolidinium, 3-(aminocarbonyl)-2,2,5,5-tetramethyl-1-oxo- (CA INDEX NAME)



CC 22-7 (Physical Organic Chemistry)
Section cross-reference(s): 72, 74, 77
IT 46147-12-0
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative) (scandium ion-accelerated scavenging reaction of cumylperoxyl radical by cyclic nitroxyl radical via electron transfer)
OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

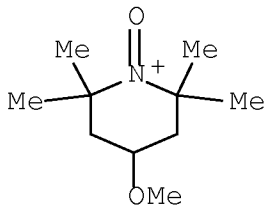
L25 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 2006:1092057 HCAPLUS Full-text
DN 146:29957
TI The use of 2,2,6,6-tetramethylpiperinyl-oxides and derivatives for redox shuttle additives in Li-ion cells
AU Buhrmester, Claudia; Moshurchak, L. M.; Wang, R. L.; Dahn, J. R.
CS Department of Physics and Atmospheric Science, Dalhousie University, Halifax, NS, B3H 3J5, Can.
SO Journal of the Electrochemical Society (2006), 153(10), A1800-A1804
CODEN: JESOAN; ISSN: 0013-4651
PB Electrochemical Society
DT Journal
LA English
AB The stable radical, 2,2,6,6-tetramethylpiperinyl oxide (TEMPO), is a stable redox shuttle in Li4/3Ti5/3O4/LiFePO4 Li-ion coin cells providing over 120 cycles of shuttle-protected overcharge. Derivs. of TEMPO, such as 4-methoxy-TEMPO and 4-cyano-TEMPO are also stable. Relatives of TEMPO, having a 5-membered ring, such as 3-cyano-2,2,5,5-tetramethyl-1-pyrrolidinyloxy (3-cyano-PROXYL) show similar stability. One disadvantage of these mols. is their relatively low oxidation potentials, which are too close to that of LiFePO4 for com. applications. Ab initio calcns. show that the redox potential of

these mols. can be tailored by substitutions of F for the H atoms in the Me groups.

IT **135023-08-4**
RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(methylpiperinyl oxides and derivs. as redox shuttle additives for Li-ion **batteries**)

RN 135023-08-4 HCAPLUS

CN Piperidinium, 4-methoxy-2,2,6,6-tetramethyl-1-oxo- (CA INDEX NAME)



CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 72

ST tetramethylpiperinyl oxide deriv redox shuttle additive lithium ion **battery**

IT Secondary **batteries**
(lithium; methylpiperinyl oxides and derivs. as redox shuttle additives for Li-ion **batteries**)

IT 21324-40-3, Lithium hexafluorophosphate (LiPF6) 244761-29-3, Lithium bis(oxalato)borate
RL: TEM (Technical or engineered material use); USES (Uses)
(electrolyte; methylpiperinyl oxides and derivs. as redox shuttle additives for Li-ion **batteries** with)

IT 2564-83-2, Tempo 2896-70-0, 4-Oxo-TEMPO 3225-26-1 35203-66-8 37149-18-1 38078-71-6 **135023-08-4** 299895-12-8 913815-78-8 913815-79-9 913815-81-3 913815-83-5
RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(methylpiperinyl oxides and derivs. as redox shuttle additives for Li-ion **batteries**)

OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:981494 HCAPLUS Full-text

DN 145:339158
TI Secondary lithium ion **battery** containing nitroxyl radical compound in electrolytic solution for overcharging resistance
IN Nakahara, Kentaro; Matsuu, Masaaki
PA Nec Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 29pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006252917	A	20060921	JP 2005-67186	20050310

PRAI JP 2005-67186 20050310

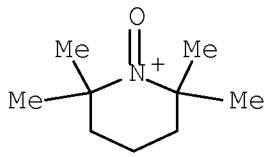
AB The disclosed **battery** contains a nitroxyl radical compound in the electrolytic solution and an active mass compound having redox potential lower than the radical compound in the **cathode**. Increase of voltage in the **battery** is suppressed even under long-term overcharging.

IT **863309-36-8** **909534-31-2**
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(lithium ion **battery** containing **nitroxyl** radical compound in electrolytic solution and **cathode** active mass with low redox potential for overcharging resistance)

RN 863309-36-8 HCAPLUS
CN Piperidinium, 2,2,6,6-tetramethyl-, 1-oxide hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

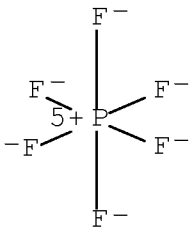
CM 1

CRN 45842-10-2
CMF C9 H18 N O



CM 2

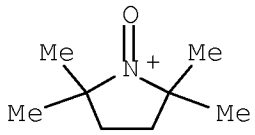
CRN 16919-18-9
CMF F6 P
CCI CCS



RN 909534-31-2 HCAPLUS
CN Pyrrolidinium, 2,2,5,5-tetramethyl-1-oxo-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

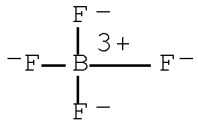
CM 1

CRN 863309-37-9
CMF C8 H16 N O



CM 2

CRN 14874-70-5
CMF B F4
CCI CCS



CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST **cathode** active mass nitroxyl radical electrolytic soln lithium **battery**; overcharging resistance lithium ion **battery** nitroxyl radical electrolytic soln
IT **Battery cathodes**
Electrolytic solutions
(lithium ion **battery** containing nitroxyl radical compound in electrolytic solution and **cathode** active mass with low redox potential for overcharging resistance)
IT Radicals, uses
RL: DEV (Device component use); USES (Uses)
(lithium ion **battery** containing nitroxyl radical compound in electrolytic solution and **cathode** active mass with low redox potential for overcharging resistance)
IT 12031-92-4, Lithium manganese oxide (Li4Mn5O12) 12162-79-7, Lithium manganese oxide (LiMnO2) 15365-14-7, Iron lithium phosphate (FeLiPO4)
RL: DEV (Device component use); USES (Uses)
(**cathode** active mass; lithium ion **battery** containing nitroxyl radical compound in electrolytic solution and **cathode** active mass with low redox potential for overcharging resistance)
IT 2406-25-9 2564-83-2 3229-53-6 27720-81-6 34549-03-6 38582-73-9 **863309-36-8** **909534-31-2**
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(lithium ion **battery** containing **nitroxyl** radical compound in electrolytic solution and **cathode** active mass with low redox potential for overcharging resistance)

L25 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 2005:902407 HCAPLUS Full-text
DN 143:250986
TI Secondary **batteries** using nitroxyl compound **cathode** active mass and good charge-discharge cycle performance
IN Nakahara, Kentaro; Iriyama, Jiro; Iwasa, Shigeyuki; Suguro, Masahiro; Sato, Masaharu
PA NEC Corp., Japan

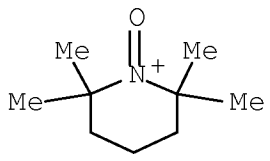
SO Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005228712	A	20050825	JP 2004-38802	200402 16

PRAI JP 2004-38802 20040216
OS MARPAT 143:250986
AB The devices have nitroxyl compound **cathode** active mass where electrons are exchanged between oxidized state N+:O and reduced state NO·, and Li or Li alloy anode active mass, where a part of the nitroxyl compds. are dissolved in electrolytic solns. Thus, a button-type secondary Li **batteries** having a **cathode** containing carbon paper impregnated with an electrolytic solution containing 2,2,6,6-tetramethyl-1-oxopiperidinium hexafluorophosphate, a Li anode, and porous polyethylene separator impregnated with the electrolytic solution is exemplified.
IT **31198-93-3P** **33247-78-8P** **863309-36-8P**
863309-38-0P **863309-40-4P**
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(secondary **batteries** using **nitroxyl** compound **cathode** active mass partly dissolved in electrolytic solns., and Li or Li alloy anode active mass)
RN 31198-93-3 HCAPLUS
CN Piperidinium, 2,2,6,6-tetramethyl-, 1-oxide perchlorate (1:1) (CA INDEX NAME)

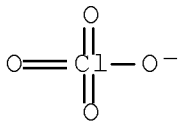
CM 1

CRN 45842-10-2
CMF C9 H18 N O



CM 2

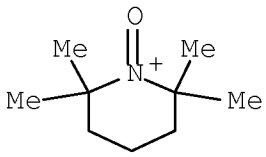
CRN 14797-73-0
CMF Cl O4



RN 33247-78-8 HCAPLUS
CN Piperidinium, 2,2,6,6-tetramethyl-1-oxo-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

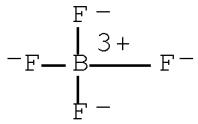
CM 1

CRN 45842-10-2
CMF C9 H18 N O



CM 2

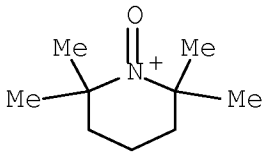
CRN 14874-70-5
CMF B F4
CCI CCS



RN 863309-36-8 HCAPLUS
CN Piperidinium, 2,2,6,6-tetramethyl-, 1-oxide hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

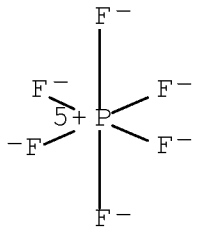
CM 1

CRN 45842-10-2
CMF C9 H18 N O



CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS

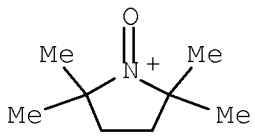


RN 863309-38-0 HCAPLUS

CN Pyrrolidinium, 2,2,5,5-tetramethyl-1-oxo-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

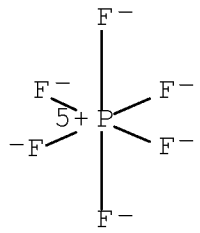
CM 1

CRN 863309-37-9
CMF C8 H16 N O



CM 2

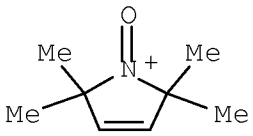
CRN 16919-18-9
CMF F6 P
CCI CCS



RN 863309-40-4 HCAPLUS
CN 1H-Pyrrolium, 2,5-dihydro-2,2,5,5-tetramethyl-1-oxo-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

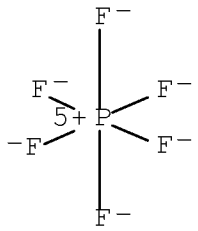
CM 1

CRN 863309-39-1
CMF C8 H14 N O



CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS

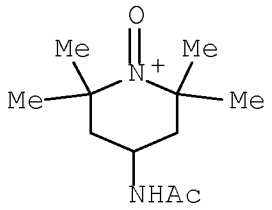


IC ICM H01M010-40
ICS H01M004-02; H01M004-38; H01M004-60; H01M004-66
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 27
ST lithium battery cathode nitroxyl compd; tetramethyloxopiperidinium fluorophosphate cathode button lithium battery
IT Secondary batteries
(button-type; secondary batteries using nitroxyl compound cathode active mass partly dissolved in electrolytic solns., and Li or Li alloy anode active mass)
IT Copying paper
(carbon paper, cathode current collector; secondary batteries using nitroxyl compound cathode active mass partly dissolved in electrolytic solns., and Li or Li alloy anode active mass)
IT Secondary batteries
(lithium; secondary batteries using nitroxyl compound cathode active mass partly dissolved in electrolytic solns., and Li or Li alloy anode active mass)

IT Battery anodes
Battery cathodes
(secondary batteries using nitroxyl compound cathode active mass partly dissolved in electrolytic solns., and Li or Li alloy anode active mass)
IT Lithium alloy, base
RL: DEV (Device component use); USES (Uses)
(secondary batteries using nitroxyl compound cathode active mass partly dissolved in electrolytic solns., and Li or Li alloy anode active mass)
IT 7429-90-5, Aluminum, uses
RL: DEV (Device component use); USES (Uses)
(cathode; secondary batteries using nitroxyl compound cathode active mass partly dissolved in electrolytic solns., and Li or Li alloy anode active mass)
IT 7439-93-2, Lithium, uses 53680-59-4 95535-75-4, Lithium silicide
RL: DEV (Device component use); USES (Uses)
(secondary batteries using nitroxyl compound cathode active mass partly dissolved in electrolytic solns., and Li or Li alloy anode active mass)
IT 31198-93-3P 33247-78-8P 863309-36-8P
863309-38-0P 863309-40-4P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(secondary batteries using nitroxyl compound cathode active mass partly dissolved in electrolytic solns., and Li or Li alloy anode active mass)
IT 2564-83-2, 2,2,6,6-Tetramethylpiperidinyloxy
RL: DEV (Device component use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(secondary batteries using nitroxyl compound cathode active mass partly dissolved in electrolytic solns., and Li or Li alloy anode active mass)
IT 3229-53-6, 2,2,5,5-Tetramethylpyrrolidinyloxy 27720-81-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(secondary batteries using nitroxyl compound cathode active mass partly dissolved in electrolytic solns., and Li or Li alloy anode active mass)

L25 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 2004:937 HCAPLUS Full-text
DN 140:217194
TI Reaction of Nitrosonium Tetrafluoroborate with Nitroxyl Radicals
AU Borodkin, G. I.; Elanov, I. R.; Shakirov, M. M.; Shubin, V. G.
CS Siberian Division, Vorozhtsov Novosibirsk Institute of Organic Chemistry, Russian Academy of Sciences, Novosibirsk, 630090, Russia
SO Russian Journal of Organic Chemistry (Translation of Zhurnal

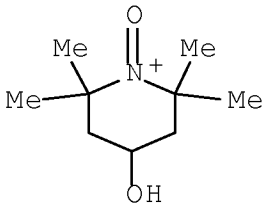
Organicheskoi Khimii) (2003), 39(8), 1144-1150
CODEN: RJOCEQ; ISSN: 1070-4280
PB MAIK Nauka/Interperiodica Publishing
DT Journal
LA English
AB It was established by means of multinuclear magnetic resonance method (1H, 13C, 19F and 14N) that reaction of 2,2,6,6-tetramethyl-4-R-piperidin-1-oxyl radicals (R = H, OH, OMe, OCOPh, NHCOMe) with nitrosonium tetrafluoroborate gave rise to the corresponding 2,2,6,6-tetramethyl-1-oxo-4-R-piperidinium tetrafluoroborates. Linear correlations were found between the chemical shifts of atoms H4, C4 of cations and resp. σ1-consts. of substituents R and chemical shifts of C4 atom calculated from increments of substitution. The conformational features of the generated nitrosonium cations are considered on the grounds of vicinal coupling consts. JHH and quantum-chemical calcns. by AM1 method.
IT 136708-39-9 666179-58-4
RL: CPS (Chemical process); FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); PROC (Process); RACT (Reactant or reagent)
(NMR and ab initio on reaction of nitrosonium tetrafluoroborate with nitroxyl radicals)
RN 136708-39-9 HCAPLUS
CN Piperidinium, 4-(acetylamino)-2,2,6,6-tetramethyl-1-oxo- (CA INDEX NAME)



RN 666179-58-4 HCAPLUS
CN Piperidinium, 4-hydroxy-2,2,6,6-tetramethyl-1-oxo-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

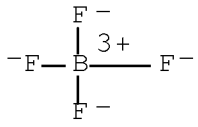
CM 1

CRN 45985-24-8
CMF C9 H18 N O2



CM 2

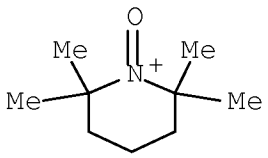
CRN 14874-70-5
CMF B F4
CCI CCS



IT 33247-78-8 33247-81-3 45985-26-0
135023-09-5 219543-09-6 666179-59-5
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)
(NMR and ab initio on reaction of nitrosonium tetrafluoroborate with nitroxyl radicals)
RN 33247-78-8 HCAPLUS
CN Piperidinium, 2,2,6,6-tetramethyl-1-oxo-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

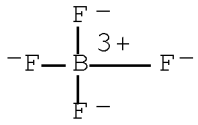
CM 1

CRN 45842-10-2
CMF C9 H18 N O



CM 2

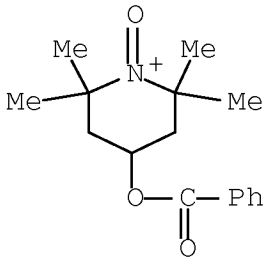
CRN 14874-70-5
CMF B F4
CCI CCS



RN 33247-81-3 HCAPLUS
CN Piperidinium, 4-(benzoyloxy)-2,2,6,6-tetramethyl-1-oxo-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

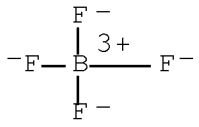
CM 1

CRN 47089-86-1
CMF C16 H22 N O3

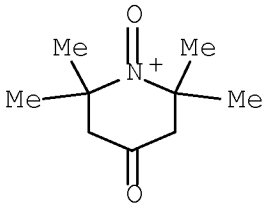


CM 2

CRN 14874-70-5
CMF B F4
CCI CCS



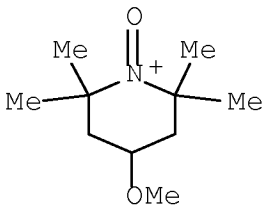
RN 45985-26-0 HCAPLUS
CN Piperidinium, 2,2,6,6-tetramethyl-1,4-dioxo- (9CI) (CA INDEX NAME)



RN 135023-09-5 HCAPLUS
CN Piperidinium, 4-methoxy-2,2,6,6-tetramethyl-1-oxo-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

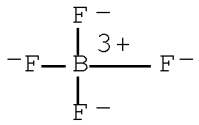
CM 1

CRN 135023-08-4
CMF C10 H20 N O2



CM 2

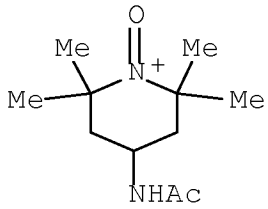
CRN 14874-70-5
CMF B F4
CCI CCS



RN 219543-09-6 HCAPLUS
CN Piperidinium, 4-(acetylamino)-2,2,6,6-tetramethyl-1-oxo-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

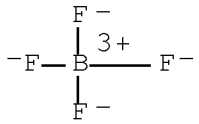
CM 1

CRN 136708-39-9
CMF C11 H21 N2 O2

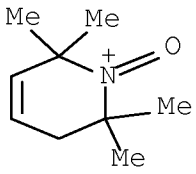


CM 2

CRN 14874-70-5
CMF B F4
CCI CCS



RN 666179-59-5 HCAPLUS
CN Pyridinium, 1,2,3,6-tetrahydro-2,2,6,6-tetramethyl-1-oxo- (9CI) (CA INDEX NAME)



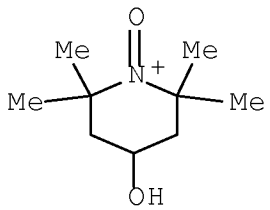
CC 22-7 (Physical Organic Chemistry)
Section cross-reference(s): 27, 77
IT 136708-39-9 666179-58-4
RL: CPS (Chemical process); FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); PROC (Process); RACT (Reactant or reagent)
(NMR and ab initio on reaction of nitrosonium tetrafluoroborate with nitroxyl radicals)
IT 33247-78-8 33247-81-3 45985-26-0
135023-09-5 219543-09-6 666179-59-5
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)
(NMR and ab initio on reaction of nitrosonium tetrafluoroborate with nitroxyl radicals)
OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 2001:613303 HCAPLUS Full-text
DN 135:344169
TI Interaction of chlorine dioxide with nitroxyl radicals
AU Ganiev, I. M.; Timergazin, K. K.; Shereshovets, V. V.; Grigor'ev, I.

A.; Tolstikov, G. A.
CS Institute of Organic Chemistry, Ufa Research Center of the Russian Academy of Sciences, Ufa, 450054, Russia
SO Russian Chemical Bulletin (Translation of Izvestiya Akademii Nauk, Seriya Khimicheskaya) (2001), 50(4), 614-619
CODEN: RCBUEY; ISSN: 1066-5285
PB Kluwer Academic/Consultants Bureau
DT Journal
LA English
AB The formation of charge transfer complexes between chlorine dioxide and nitroxyl radicals [2,2,6,6-tetramethylpiperidin-1-oxyl, 4-hydroxy-2,2,6,6-tetramethylpiperidin-1-oxyl, 4-oxo-2,2,6,6-tetramethylpiperidin-1-oxyl, 4-methoxy-2,2,6,6-tetramethylpiperidin-1-oxyl, 4-acetylamido-2,2,6,6-tetramethylpiperidin-1-oxyl, 2,2,5,5-tetramethyl-4-phenyl-3-imidazolin-1-oxyl, and bis(4-methoxyphenyl) nitroxide] in acetone, acetonitrile, n-heptane, di-Et ether, carbon tetrachloride, toluene, and dichloromethane was found by spectrophotometry at -60 to +20°C. The thermodn. parameters of complex formation were determined The radical structure affects its complex formation ability. The charge transfer complex is transformed into the corresponding oxoammonium salt.
IT 233280-37-0P 328557-80-8P
371156-05-7P 371156-06-8P 371156-08-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(charge-transfer complexation of chlorine dioxide with nitroxyl radicals and their further transformation to oxoammonium chlorites)
RN 233280-37-0 HCAPLUS
CN Piperidinium, 4-hydroxy-2,2,6,6-tetramethyl-1-oxo-, chlorite (salt) (9CI) (CA INDEX NAME)

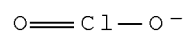
CM 1

CRN 45985-24-8
CMF C9 H18 N O2



CM 2

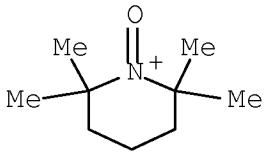
CRN 14998-27-7
CMF Cl O2



RN 328557-80-8 HCAPLUS
CN Piperidinium, 2,2,6,6-tetramethyl-1-oxo-, chlorite (CA INDEX NAME)

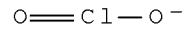
CM 1

CRN 45842-10-2
CMF C9 H18 N O



CM 2

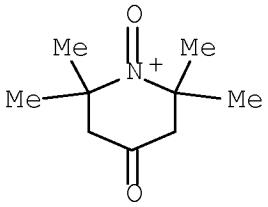
CRN 14998-27-7
CMF Cl O2



RN 371156-05-7 HCAPLUS
CN Piperidinium, 2,2,6,6-tetramethyl-1,4-dioxo-, chlorite (9CI) (CA INDEX NAME)

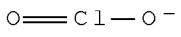
CM 1

CRN 45985-26-0
CMF C9 H16 N O2



CM 2

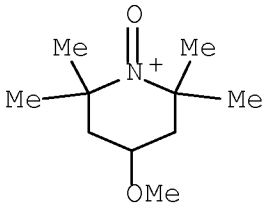
CRN 14998-27-7
CMF Cl O2



RN 371156-06-8 HCAPLUS
CN Piperidinium, 4-methoxy-2,2,6,6-tetramethyl-1-oxo-, chlorite (9CI) (CA INDEX NAME)

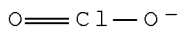
CM 1

CRN 135023-08-4
CMF C10 H20 N O2



CM 2

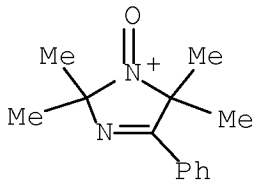
CRN 14998-27-7
CMF Cl O2



RN 371156-08-0 HCAPLUS
CN 1H-Imidazolium, 2,5-dihydro-2,2,5,5-tetramethyl-1-oxo-4-phenyl-, chlorite (9CI) (CA INDEX NAME)

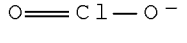
CM 1

CRN 371156-07-9
CMF C13 H17 N2 O



CM 2

CRN 14998-27-7
CMF Cl O2



CC 22-12 (Physical Organic Chemistry)
IT 233280-37-0P 328557-80-8P
371156-05-7P 371156-06-8P 371156-08-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(charge-transfer complexation of chlorine dioxide with nitroxyl radicals and their further transformation to oxoammonium chlorites)

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2001:167234 HCAPLUS Full-text

DN 135:52639

TI Selective electrocatalytic oxidation of N-alkyl-N-methylanilines to N-alkylformanilides using nitroxyl radical

AU Kashiwagi, Yoshitomo; Anzai, Jun-Ichi

CS Graduate School of Pharmaceutical Sciences, Tohoku University, Sendai, 980-8578, Japan

SO Chemical & Pharmaceutical Bulletin (2001), 49(3), 324-326
CODEN: CPBTAL; ISSN: 0009-2363

PB Pharmaceutical Society of Japan

DT Journal

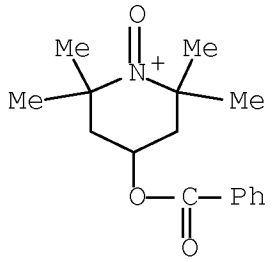
LA English

AB Electrocatalytic oxidation of N-alkyl-N-methylanilines was studied using 4-benzoyloxy-2,2,6,6-tetramethylpiperidinyl-N-oxyl as a nitroxyl radical. The reaction with N-alkyl-N-methylanilines led to direct formation of N-alkylformanilides in the presence of H2O in reaction media in adequate conversion (>75.8%), high current efficiency (>89.2%) and high selectivity (>93.8%).

IT 47089-86-1
RL: FMU (Formation, unclassified); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
(electrochem. oxidative formation in selective electrocatalytic oxidation of N-alkylmethylanilines to N-alkylformanilides using nitroxyl radical)

RN 47089-86-1 HCAPLUS

CN Piperidinium, 4-(benzoyloxy)-2,2,6,6-tetramethyl-1-oxo- (9CI) (CA INDEX NAME)



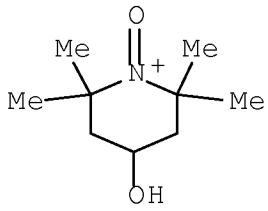
CC 72-2 (Electrochemistry)
Section cross-reference(s): 22, 25
IT 47089-86-1
RL: FMU (Formation, unclassified); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
(electrochem. oxidative formation in selective electrocatalytic oxidation of N-alkylmethylanilines to N-alkylformanilides using nitroxyl radical)
OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 1999:380262 HCAPLUS Full-text
DN 131:115978
TI Complexes of chlorine dioxide with nitroxyl radicals
AU Ganiev, Ilgiz M.; Timerghazin, Qadir K.; Khalizov, Alexey F.; Andriyashina, Nadezhda M.; Shereshovets, Valerii V.; Volodarsky, Leonid B.; Tolstikov, Genrikh A.
CS Institute of Organic Chemistry, Ufa Research Centre of Russian Academy of Sciences, Ufa, Russia
SO Tetrahedron Letters (1999), 40(25), 4737-4740
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
AB Chlorine dioxide forms red-colored (λmax=480 nm) CT complexes with persistent piperidine and imidazoline nitroxyl radicals in di-Et ether, n-pentane, carbon tetrachloride, methylene chloride and on silica gel surface. Equilibrium consts., enthalpy and entropy of formation and extinction coefficient of the complex between ClO2 and 2,2,6,6-tetramethyl-4-hydroxypiperidin-1-oxyl in di-Et ether were determined In Et2O the complex is stable under normal conditions, in other media it transforms into the oxoammonium salt.

IT 233280-37-0
RL: FMU (Formation, unclassified); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
(CT complexes of chlorine dioxide with nitroxyl radicals as intermediates in their conversion to oxoammonium salts)
RN 233280-37-0 HCAPLUS
CN Piperidinium, 4-hydroxy-2,2,6,6-tetramethyl-1-oxo-, chlorite (salt) (9CI) (CA INDEX NAME)

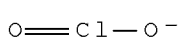
CM 1

CRN 45985-24-8
CMF C9 H18 N O2



CM 2

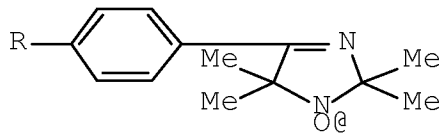
CRN 14998-27-7
CMF Cl O2



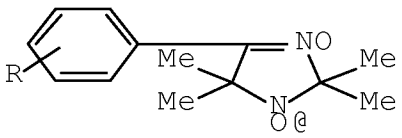
CC 22-12 (Physical Organic Chemistry)
IT 233280-37-0
RL: FMU (Formation, unclassified); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
(CT complexes of chlorine dioxide with nitroxyl radicals as intermediates in their conversion to oxoammonium salts)
OSC.G 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

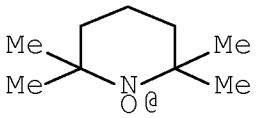
L25 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 1987:597363 HCAPLUS Full-text
DN 107:197363
OREF 107:31643a,31646a
TI Study of reactions of nitroxyl radicals in strong acids and superacids by EPR and proton and carbon-13 NMR
AU Grigor'ev, I. A.; Shchukin, G. I.; Volodarskii, L. B.
CS Inst. Org. Khim., Novosibirsk, USSR
SO Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1986), (10), 2277-83
CODEN: IASKA6; ISSN: 0002-3353
DT Journal
LA Russian
GI



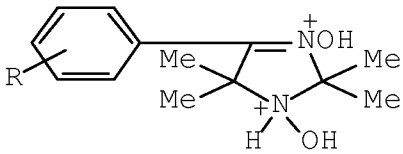
I



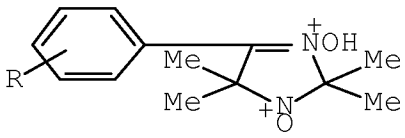
II



III



IV

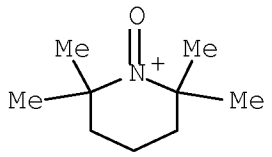


V

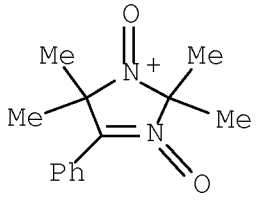
AB Protonation of nitroxides I (R = H, F), II (R = H, 4-Me, 4-F, 4-NO2, 2-NO2, etc.), and III in strong acids or superacids gave dications, e.g., IV and V. Smaller concns. of cation radicals were also detected.

IT 45842-10-2P 95883-71-9P 95883-74-2P
95883-75-3P 110880-82-5P 110880-83-6P
110880-84-7P
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, from nitroxyl radicals in acids)

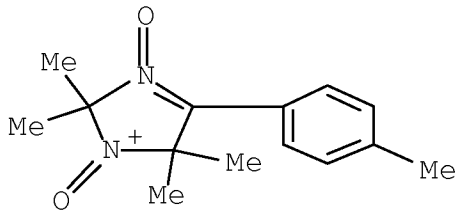
RN 45842-10-2 HCAPLUS
CN Piperidinium, 2,2,6,6-tetramethyl-1-oxo- (CA INDEX NAME)



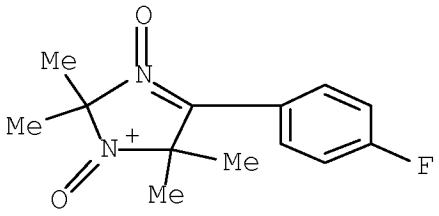
RN 95883-71-9 HCAPLUS
CN 1H-Imidazolium, 2,5-dihydro-2,2,5,5-tetramethyl-4-phenyl-, conjugate acid (1:1) (CA INDEX NAME)



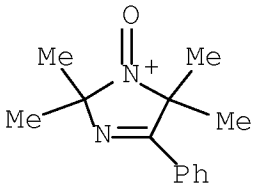
RN 95883-74-2 HCAPLUS
CN 1H-Imidazolium, 2,5-dihydro-2,2,5,5-tetramethyl-4-(4-methylphenyl)-, conjugate acid (1:1) (CA INDEX NAME)



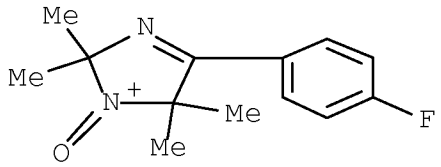
RN 95883-75-3 HCAPLUS
CN 1H-Imidazolium, 4-(4-fluorophenyl)-2,5-dihydro-2,2,5,5-tetramethyl-, conjugate acid (1:1) (CA INDEX NAME)



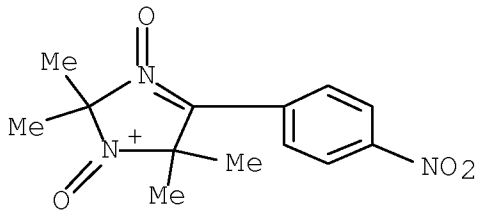
RN 110880-82-5 HCAPLUS
CN 1H-Imidazolium, 2,5-dihydro-2,2,5,5-tetramethyl-4-phenyl-, conjugate acid (1:1) (CA INDEX NAME)



RN 110880-83-6 HCAPLUS
CN 1H-Imidazolium, 4-(4-fluorophenyl)-2,5-dihydro-2,2,5,5-tetramethyl-, conjugate acid (1:1) (CA INDEX NAME)



RN 110880-84-7 HCAPLUS
CN 1H-Imidazolium, 2,5-dihydro-2,2,5,5-tetramethyl-4-(4-nitrophenyl)-, conjugate acid (1:1) (CA INDEX NAME)



CC 22-10 (Physical Organic Chemistry)
IT 45842-10-2P 95883-70-8P 95883-71-9P
95883-72-0P 95883-73-1P 95883-74-2P
95883-75-3P 110880-79-0P 110880-81-4P
110880-82-5P 110880-83-6P 110880-84-7P
110880-85-8P 110906-60-0P
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, from nitroxyl radicals in acids)

=> d l32 1-8 bib abs hitstr hitind
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

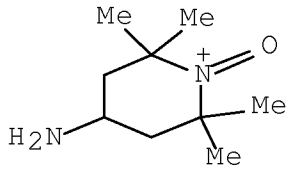
L32 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 2008:309637 HCAPLUS Full-text
DN 150:261964
TI Spectral Properties of Probes Containing Benzothioxanthene Chromophore Linked with Hindered Amine in Solution and in Polymer Matrices
AU Hrdlovic, Pavol; Chmela, Stefan; Danko, Martin; Sarakha, Mohamed; Guyot, Ghislain
CS Polymer Institute, Slovak Academy of Sciences, Bratislava, 842 36, Slovakia
SO Journal of Fluorescence (2008), 18(2), 393-402
CODEN: JOFLEN; ISSN: 1053-0509
PB Springer
DT Journal
LA English
OS CASREACT 150:261964
AB Absorption and emission spectroscopy as well as laser flash photolysis was employed in order to characterize the spectral properties of novel probes based on benzothioxantheneimide chromophore covalently linked with different types of sterically hindered amines. These were chosen as 2-(2,2,6,6-tetramethyl-4-piperidyl)-thioxantheno[2,1,9- dej]isoquinoline-1,3-dione (BTXINH), the equivalent stable nitroxyl radical, i.e. 2-(1-oxo-2,2,6,6-tetramethyl-4-piperidyl)thioxantheno[2,1,9dej]isoquinoline 1,3-dione (BTXINO) and the alkoxy derivative 2-(1-(1'-phenylethoxy)-2,2,6,6-tetramethyl-4-piperidyl)-thioxantheno[2,1,9-dej]isoquinoline-1,3-dione (BTXINOR). Spectral properties, in solns. and in various polymer matrixes such as polystyrene, polymethyl methacrylate, polyvinyl chloride and polypropylene, were compared with the compound 2-(1-dodecyl)-thioxantheno[2,1,9-dej]isoquinoline-1,3-dione (BTXID) taken in the present study as a reference compound By means of the fluorescence decay and in the contrary to three other probes, BTXINO probe clearly showed a bi-exponential decay while the three other probes led to monoexponential decay. Two different singlet excited states with lifetimes of about 0.4 and 5 ns were proposed. They correspond to two dispositions of the nitroxyl radical chain above and along the fluorescent moiety of the mol. Such behavior depends on the surrounding media. Moreover, an efficient intramol. quenching of the fluorescence emission was only observed with the short lived singlet excited state. The ratio BTXID/BTXINO was found equal to about 4 and 9 in solns. and polymer matrixes resp. Laser flash photolysis indicated that the novel probes as well as the model compound yielded transient absorption with maximum at 530 nm, corresponding to the triplet states. The intermol. quenching of such species by mol. oxygen and by free N-oxyl, such as 1-oxy-2,2,6,6-teramethylpiperidine

(TEMPO) and 1-oxy-2,2,6,6-teramethyl-4-hydroxypiperidine (TEMPOL), and the intramol. quenching was not efficient.

IT 192767-74-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(spectral properties of benzothioxanthene chromophore linked with hindered amine in solution and in polymer matrixes)

RN 192767-74-1 HCAPLUS

CN Piperidinium, 4-amino-2,2,6,6-tetramethyl-1-oxo- (CA INDEX NAME)



CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 74

ST spectra benzothioxanthene chromophore linked hindered amine soln polymer matrix; fluorescence quantum yield stable radical polymer matrix

IT Flash photolysis
(laser; spectral properties of benzothioxanthene chromophore linked with hindered amine in solution and in polymer matrixes)

IT Fluorescence quenching
(of anthracene by radicals; spectral properties of benzothioxanthene chromophore linked with hindered amine in solution and in polymer matrixes)

IT Chromophores
Emission spectra
Fluorescence
Fluorescent indicators
Triplet state
UV and visible spectra
(spectral properties of benzothioxanthene chromophore linked with hindered amine in solution and in polymer matrixes)

IT 55684-18-9
RL: CAT (Catalyst use); USES (Uses)
(spectral properties of benzothioxanthene chromophore linked with hindered amine in solution and in polymer matrixes)

IT 9002-86-2, PVC 9003-07-0, Polypropylene 9003-53-6, Polystyrene

9011-14-7, PMMA
RL: NUU (Other use, unclassified); USES (Uses)
(spectral properties of benzothioxanthene chromophore linked with hindered amine in solution and in polymer matrixes)
IT 120-12-7, Anthracene, properties 2226-96-2, TEMPOL 2564-83-2, TEMPO
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(spectral properties of benzothioxanthene chromophore linked with hindered amine in solution and in polymer matrixes)
IT 266358-78-5P 881205-96-5P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(spectral properties of benzothioxanthene chromophore linked with hindered amine in solution and in polymer matrixes)
IT 52222-05-6P 1120349-57-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(spectral properties of benzothioxanthene chromophore linked with hindered amine in solution and in polymer matrixes)
IT 100-42-5, Styrene, reactions 124-22-1, Dodecylamine 14121-49-4 36768-62-4, 4-Amino-2,2,6,6-tetramethylpiperidine 192767-74-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(spectral properties of benzothioxanthene chromophore linked with hindered amine in solution and in polymer matrixes)
IT 16940-66-2
RL: RGT (Reagent); RACT (Reactant or reagent)
(spectral properties of benzothioxanthene chromophore linked with hindered amine in solution and in polymer matrixes)
OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

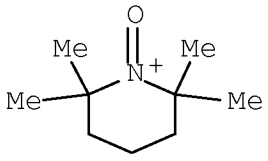
L32 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 2007:778762 HCAPLUS Full-text
DN 147:323382
TI Towards controlled graft polymerization of poly[styrene-co-(maleic anhydride)] on functionalized silica mediated by oxoaminium bromide salt. Facile synthetic pathway using nitroxide chemistry
AU Bonilla-Cruz, Jose; Lara-Ceniceros, Tania; Saldivar-Guerra, Enrique; Jimenez-Regalado, Enrique
CS Centro de Investigacion en Quimica Aplicada (CIQA), Coahuila, 25253, Mex.
SO Macromolecular Rapid Communications (2007), 28(13), 1397-1403

CODEN: MRCOE3; ISSN: 1022-1336
PB Wiley-VCH Verlag GmbH & Co. KGaA
DT Journal
LA English

AB A TEMPO bromide salt is used to functionalize a silica surface with nitroxyl moieties. The functionalization reaction takes place in 48 h under mild conditions. In a second step, grafts of styrene-maleic anhydride copolymer are grown from the functionalized silica surface by heating it in the presence of the monomers. FT-IR and TGA anal. show that the silica was first functionalized with nitroxide moieties, and then that grafts of styrene-maleic anhydride grew from the functionalized silica surface. A reaction mechanism is proposed in order to explain the findings. The results suggest that the oxoaminium salts are good candidates for the functionalization and grafting of surfaces that contain hydroxy groups and for the generation of hybrid materials with improved properties.

IT 85917-27-7DP, surface reaction product with silica
RL: CAT (Catalyst use); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(facile synthetic pathway using nitroxide chemical towards controlled graft polymerization of poly[styrene-co-(maleic anhydride)] on functionalized silica mediated by oxoaminium bromide salt)

RN 85917-27-7 HCAPLUS
CN Piperidinium, 2,2,6,6-tetramethyl-1-oxo-, bromide (CA INDEX NAME)



● Br⁻

CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 37

ST TEMPO functionalized silica surface graft styrene maleic anhydride copolymer

IT Composites
Molecular weight
Polydispersity

Polymer chains
Thermal stability
(facile synthetic pathway using nitroxide chemical towards controlled graft polymerization of poly[styrene-co-(maleic anhydride)] on functionalized silica mediated by oxoaminium bromide salt)

IT Polymerization
(graft, surface; facile synthetic pathway using nitroxide chemical towards controlled graft polymerization of poly[styrene-co-(maleic anhydride)] on functionalized silica mediated by oxoaminium bromide salt)

IT 85917-27-7DP, surface reaction product with silica
RL: CAT (Catalyst use); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(facile synthetic pathway using nitroxide chemical towards controlled graft polymerization of poly[styrene-co-(maleic anhydride)] on functionalized silica mediated by oxoaminium bromide salt)

IT 7631-86-9DP, Silica, TEMPO-functionalized
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(facile synthetic pathway using nitroxide chemical towards controlled graft polymerization of poly[styrene-co-(maleic anhydride)] on functionalized silica mediated by oxoaminium bromide salt)

IT 2564-83-2 7726-95-6, Bromine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(facile synthetic pathway using nitroxide chemical towards controlled graft polymerization of poly[styrene-co-(maleic anhydride)] on functionalized silica mediated by oxoaminium bromide salt)

IT 9011-13-6P, Maleic anhydride-styrene copolymer
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(graft on silica surface; facile synthetic pathway using nitroxide chemical towards controlled graft polymerization of poly[styrene-co-(maleic anhydride)] on functionalized silica mediated by oxoaminium bromide salt)

OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

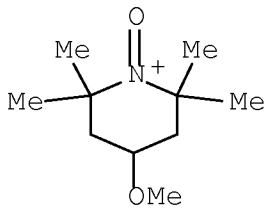
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 1994:324380 HCAPLUS Full-text
DN 120:324380

OREF 120:57097a,57100a
TI Synthesis of Polystyrene Having an Aminoxy Terminal by the Reactions of Living Polystyrene with an Oxoaminium Salt and with the Corresponding Nitroxyl Radical
AU Yoshida, Eri; Ishizone, Takashi; Hirao, Akira; Nakahama, Seiichi; Takata, Toshikazu; Endo, Takeshi
CS Department of Polymer Chemistry, Tokyo Institute of Technology, Tokyo, 152, Japan
SO Macromolecules (1994), 27(12), 3119-24
CODEN: MAMOBX; ISSN: 0024-9297
DT Journal
LA English
AB In order to introduce the C-O-N linkage at the polymer chain end, the reactions of poly(styryllithium) with 1-oxo-4-methoxy-2,2,6,6-tetramethylpiperidinium salt (OAS) and with the corresponding nitroxyl radical (MTEMPO) were investigated in THF at -78 °. The aminoxy terminal group was introduced quant. by the reactions of the living polymer with OAS in the presence of MTEMPO. The reactions proceed via one-electron transfer from the polystyryl anion to OAS, resulting in the polymer radical, which is coupled with MTEMPO, to yield the polystyrene with an aminoxy terminal. Similarly, the electron-transfer reaction proceeded between poly(styryllithium) and MTEMPO to yield the aminoxy-terminated polystyrene quant. The resulting polystyrene could initiate the radical polymns. of Me, Et, and Bu acrylates to give the corresponding block copolymers.
IT 148537-46-6DP, 4-Methoxy-2,2,6,6-tetramethyl-1-oxopiperidinium hexafluoroantimonate, reaction products with polystyrene
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and block polymerization of, with acrylates)
RN 148537-46-6 HCAPLUS
CN Piperidinium, 4-methoxy-2,2,6,6-tetramethyl-1-oxo-, (OC-6-11)-hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

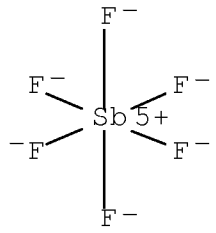
CM 1

CRN 135023-08-4
CMF C10 H20 N O2



CM 2

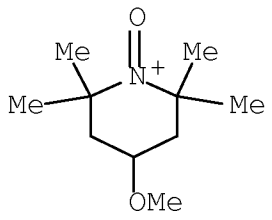
CRN 17111-95-4
CMF F6 Sb
CCI CCS



CC 35-8 (Chemistry of Synthetic High Polymers)
ST aminoxy terminated polystyrene block polymn;
oxomethoxytetramethylpiperidinium reaction polystyrene;
methoxytetramethylpiperidinoxyl reaction polystyrene
IT 9003-53-6DP, Polystyrene, aminoxy-terminated 95407-69-5DP,
4-Methoxy-2,2,6,6-tetramethylpiperidin-1-oxyl, reaction products
with polystyrene 148537-46-6DP,
4-Methoxy-2,2,6,6-tetramethyl-1-oxopiperidinium
hexafluoroantimonate, reaction products with polystyrene
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation and block polymerization of, with acrylates)
IT 110772-34-4P, Butyl acrylate-styrene block copolymer
111740-42-2P, Methyl acrylate-styrene block copolymer
114397-35-2P, Ethyl acrylate-styrene block copolymer
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, using aminoxy-terminated polystyrene)
OSC.G 55 THERE ARE 55 CAPLUS RECORDS THAT CITE THIS RECORD (55

CITINGS)

L32 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 1993:255497 HCAPLUS Full-text
DN 118:255497
OREF 118:44425a,44428a
TI Oxidation of poly(vinyl alcohol) with an oxoammonium salt
AU Yoshida, Eri; Yamaguchi, Masao; Takata, Toshikazu; Endo, Takeshi
CS Res. Lab. Resour. Util., Tokyo Inst. Technol., Yokohama, 227, Japan
SO Makromolekulare Chemie (1993), 194(5), 1307-14
CODEN: MACEAK; ISSN: 0025-116X
DT Journal
LA English
AB Oxidation of poly(vinyl alc.) (I) with 1-oxo-4-methoxy-2,2,6,6-tetramethylpiperidinium chloride (II) prepared by a 1-electron oxidation of the corresponding nitroxyl radical was carried out. I with d.p. 300 and degree of saponification (DS) 88 mol% was oxidized with II in the presence of Mg(ClO4)2 in N-methyl-2-pyrrolidone to obtain a polymer containing 66 mol% ketone units. The oxidation was dependent on solvent and inorg. additive and DS of I but independent of d.p. In the case of I with extremely low (10 mol%) or high (98.5 mol%) DS, no or little oxidation took place. The highest ketone content was obtained in a polymer with DS 88 mol%. The ketone content could be controlled by the amount of II.
IT 95407-70-8
RL: USES (Uses)
(oxidizing agents, for saponified poly(vinyl acetate))
RN 95407-70-8 HCAPLUS
CN Piperidinium, 4-methoxy-2,2,6,6-tetramethyl-, 1-oxide chloride (1:1) (CA INDEX NAME)



● Cl⁻

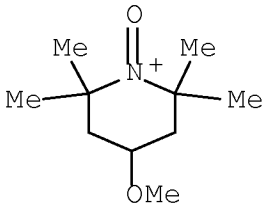
CC 35-8 (Chemistry of Synthetic High Polymers)

IT 95407-70-8
RL: USES (Uses)
(oxidizing agents, for saponified poly(vinyl acetate))

L32 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 1992:651935 HCAPLUS Full-text
DN 117:251935
OREF 117:43639a,43642a
TI Oxidation of polymeric terminal diols with iron(III) or copper(II) salts mediated by the nitroxyl radical
AU Yoshida, Eri; Takata, Toshikazu; Endo, Takeshi
CS Res. Lab. Resour. Util., Tokyo Inst. Technol., Yokohama, 227, Japan
SO Macromolecules (1992), 25(26), 7282-5
CODEN: MAMOBX; ISSN: 0024-9297
DT Journal
LA English
AB 4-Substituted-2,2,6,6-tetramethylpiperidine-1-oxyl (I) is a stable radical mediating a reversible redox reaction between oxoaminium salt and hydroxylamine. The oxidation of polymeric terminal diols with Fe(III) or Cu(II) salts mediated by I is carried out to obtain the corresponding polymers containing carbonyl moieties. When 4 equiv of Cu(NO3)2, 1 equiv of Cu(OH)2 acid-trapping agent, and 0.2 equiv of I (4-methoxy derivative) are used, a hydrogenated polybutadiene terminal diol is efficiently and selectively oxidized to the corresponding polymer with aldehyde or ketone groups in both termini without any intermol. reaction. Furthermore, I supported on crosslinked polystyrene beads catalyzed efficiently the oxidation of hydrogenated polybutadiene diol.
IT 144375-62-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of and oxidation of hydrogenated polybutadiene diol with)
RN 144375-62-2 HCAPLUS
CN Piperidinium, 4-methoxy-2,2,6,6-tetramethyl-1-oxo-, nitrate (9CI) (CA INDEX NAME)

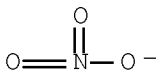
CM 1

CRN 135023-08-4
CMF C10 H20 N O2



CM 2

CRN 14797-55-8
CMF N O3

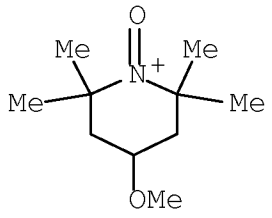


CC 35-8 (Chemistry of Synthetic High Polymers)
ST oxidn polydiol nitroxyl radical catalyst; polybutadiene hydrogenated diol oxidn nitroxyl; iron nitroxyl catalyst oxidn polydiol; copper nitroxy catalyst oxidn polydiol
IT Oxidation catalysts
(nitroxyl radical and iron or copper, for polymeric terminal diols)
IT Oxidation
(of polymeric terminal diols, in presence of nitroxyl radical and iron or copper)
IT Polyesters, reactions
Polyoxyalkylenes, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, in presence of nitroxyl radical and iron or copper)
IT Rubber, butadiene, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydroxy-terminated, oxidation of, in presence of nitroxyl radical and iron or copper)
IT 20427-59-2, Copper hydroxide (Cu(OH)2)
RL: USES (Uses)
(acid-trapping agents, for nitroxyl radical-catalyzed oxidation of polymeric terminal diols)
IT 95407-69-5

RL: CAT (Catalyst use); USES (Uses)
(catalysts, containing iron or copper salts, for oxidation of polymeric terminal diols)
IT 3251-23-8 7447-39-4, Copper chloride (CuCl2), uses 7705-08-0, Iron trichloride, uses 10028-22-5 10421-48-4 11129-27-4, Copper bromide 13746-66-2 13770-18-8
RL: CAT (Catalyst use); USES (Uses)
(catalysts, containing nitroxyl radical catalysts, for oxidation of polymeric terminal diols)
IT 2226-96-2, 4-Hydroxy-2,2,6,6-tetramethylpiperidine-1-oxyl
RL: CAT (Catalyst use); USES (Uses)
(catalysts, crosslinked polystyrene bead-supported, for oxidation of polymeric terminal diols)
IT 9003-17-2D, Polybutadiene, hydrogenated, diol 24936-97-8, Adipic acid-1,4-butanediol copolymer, sru 24979-97-3
25103-87-1, Adipic acid-1,4-butanediol copolymer
25190-06-1, THF polymer, sru
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, in presence of nitroxyl radical and iron or copper)
IT 144375-62-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of and oxidation of hydrogenated polybutadiene diol with)
IT 9003-17-2
RL: USES (Uses)
(rubber, hydroxy-terminated, oxidation of, in presence of nitroxyl radical and iron or copper)
IT 29464-22-0, (p-Chloromethyl)styrene-styrene copolymer
RL: USES (Uses)
(supports, for hydroxytetramethylpiperidineoxyl catalysts, for oxidation of polymeric terminal diols)
OSC.G 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

L32 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 1992:236311 HCAPLUS Full-text
DN 116:236311
OREF 116:40061a,40064a
TI Efficient and selective oxidation of a polymeric terminal diol with copper(II) mediated by nitroxyl radical
AU Yoshida, Eri; Takata, Toshikazu; Endo, Takeshi
CS Res. Lab. Resourc. Util., Tokyo Inst. Technol., Yokohama, 227, Japan
SO Journal of Polymer Science, Part A: Polymer Chemistry (1992), 30(6), 1193-7
CODEN: JPACEC; ISSN: 0887-624X

DT Journal
LA English
AB 4-Methoxy-2,2,6,6-tetramethylpiperidin-1-oxyl and 1-oxo-4-methoxy-2,2,6,6-tetramethylpiperidinium chloride were effective catalysts for the oxidation of hydroxy groups of hydroxy-terminated hydrogenated polybutadiene with Cu(ClO4)2, CuCl2, CuBr2, or Cu(NO3)2. The catalysts were not effective with Cu(OH)2, CuSO4, or Cu(OAc)2.
IT 95407-70-8
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for oxidation of hydroxy-terminated hydrogenated polybutadiene with copper salt)
RN 95407-70-8 HCAPLUS
CN Piperidinium, 4-methoxy-2,2,6,6-tetramethyl-, 1-oxide chloride (1:1) (CA INDEX NAME)

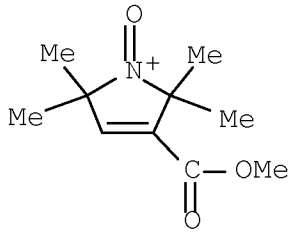


● Cl⁻

CC 35-8 (Chemistry of Synthetic High Polymers)
IT 95407-69-5 95407-70-8
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for oxidation of hydroxy-terminated hydrogenated polybutadiene with copper salt)

L32 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 1988:120887 HCAPLUS Full-text
DN 108:120887
OREF 108:19675a,19678a
TI Electrochemical oxidation of carbinols mediated by nitroxyl radicals in solution or bonded to polypyrrolic coatings on platinum and carbon electrodes
AU Deronzier, Alain; Limosin, Daniele; Moutet, Jean Claude
CS Lab. Electrochim. Org. Photochim. Redox, Univ. Sci. Technol. Med. Grenoble, Saint Martin d'Heres, 38402, Fr.
SO Electrochimica Acta (1987), 32(11), 1643-7

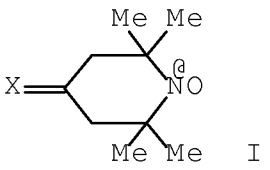
CODEN: ELCAAV; ISSN: 0013-4686
DT Journal
LA English
AB Electrochem. oxidation of carbinols mediated by the 2,2,5,5-tetramethyl-3-pyrrolin-1-oxyl, via its nitrosonium ion, were investigated. Studies were carried out with the mediator either in solution or deposited in a film form at the surface of an electrode by **electropolymn.** of a monomer containing pyrrole groups covalently bonded to the **nitroxyl** moiety.
IT **46247-55-6**
RL: PRP (Properties)
(electrooxidn. of methoxybenzyl alc. in presence of)
RN 46247-55-6 HCAPLUS
CN 1H-Pyrrolium, 2,5-dihydro-3-(methoxycarbonyl)-2,2,5,5-tetramethyl-1-oxo- (9CI) (CA INDEX NAME)



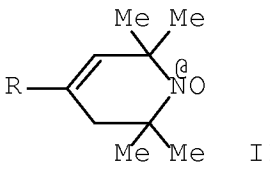
CC 72-2 (Electrochemistry)
Section cross-reference(s): 22, 25
IT Oxidation, electrochemical
(of carbinols, mediated by **nitroxyl** radicals in solution or bonded to polypyrrolic coatings on platinum and carbon electrodes)
IT **46247-55-6** 101966-15-8
RL: PRP (Properties)
(electrooxidn. of methoxybenzyl alc. in presence of)
IT 101966-14-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(**polymerization** of, electrochem., on platinum or glassy carbon electrodes, for oxidation of carbinols)
OSC.G 29 THERE ARE 29 CAPLUS RECORDS THAT CITE THIS RECORD (29 CITINGS)

L32 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 1980:163248 HCAPLUS Full-text
DN 92:163248

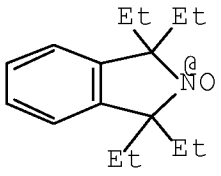
OREF 92:26453a,26456a
TI Determination of components of g- and A-tensors and rotational mobility of nitroxyl radicals by the 2-MM EPR spectroscopic method
AU Grinberg, O. Ya.; Dadali, A. A.; Dubinskii, A. A.; Vasserman, A. M.; Buchachenko, A. L.; Lebedev, Ya. S.
CS Inst. Khim. Fiz., Moscow, USSR
SO Teoreticheskaya i Eksperimental'naya Khimiya (1979), 15(5), 583-8
CODEN: TEKHA4; ISSN: 0497-2627
DT Journal
LA Russian
GI



I

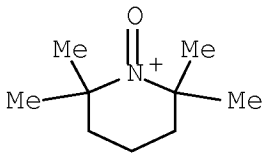


II



III

AB The g- and A-tensor components were determined for I (X = H2, O), II (R = Ph, PhC.tplbond.C, PhC.tplbond.CC.tplbond.C), and III in natural rubber and toluene matrixes. To determine rotational correlation times in the 4 + 10-12 to 6 + 10-11 s range the mm ESR region must be used. For 6 + 10-11 to 3 + 10-10 s times both the 2 mm and 3 cm regions are convenient; for times >3 + 10-10 s the 3 cm region is more convenient. The use of correlation times in spin probe studies of mol. dynamics in nonviscous liqs. and dilute polymer solns. may be possible.
IT 45842-10-2
RL: PRP (Properties)
(ESR tensor components of)
RN 45842-10-2 HCAPLUS
CN Piperidinium, 2,2,6,6-tetramethyl-1-oxo- (CA INDEX NAME)



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CC   22-2 (Physical Organic Chemistry)
     Section cross-reference(s): 68
ST   nitroxyl ESR tensor rotation; rotation nitroxyl
     correlation time
IT   Spin, electronic
        (correlation of, in nitroxyl radicals)
IT   Molecular rotation
        (of nitroxyl radical, ESR in relation to)
IT   Electron spin resonance
        (of nitroxyl radicals, tensor components in)
IT   22104-03-6   45842-10-2   69116-03-6   69116-04-7
     69116-09-2
     RL: PRP (Properties)
        (ESR tensor components of)
OSC.G   1     THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1
              CITINGS)


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